

**CLAIMS****WHAT IS CLAIMED:**

1. A method, comprising:  
receiving a data packet;  
determining if the data packet is received out of order; and  
delaying transmission of an acknowledgement indicating that a data packet is missing in response to determining that the data packet is received out of order.
2. The method of claim 1, wherein delaying comprises:  
determining that the acknowledgement should be transmitted if the data packet is received out of order; and  
waiting a preselected amount of time in response to determining that the acknowledgment should be transmitted.
3. The method of claim 2, further comprising:  
determining if the missing data packet is received within the preselected amount of time;  
and  
transmitting the acknowledgment in response to determining that the missing data packet is not received within the preselected amount of time.

4. The method of claim 1, wherein the data packet has an associated sequence number, and wherein determining that the received data packet is received out of order comprises:

determining a sequence number of a next expected data packet; and

determining if the sequence number of the received data packet is greater than the sequence number of the next expected data packet.

5. The method of claim 1, further comprising determining if packet reordering occurred prior to receiving the data packet, and wherein delaying the transmission of the acknowledgement comprises delaying the transmission of the acknowledgment in response to determining that packet reordering had occurred prior to receiving the data packet.

6. The method of claim 5, wherein determining if packet reordering occurred prior to receiving the data packet comprises:

detecting a missing data packet among one or more data packets that are received prior to receiving the data packet;

transmitting an acknowledgement indicating that the missing data packet has not been received;

receiving the missing data packet, wherein the missing data packet has an associated sequence number;

storing the received sequence number associated with the received data packet that was previously missing;

receiving one or more subsequent data packets having an associated sequence number;  
and  
comparing the stored sequence number to the sequence number associated with the one  
or more subsequently received data packets to determine if packet reordering  
occurred.

7. The method of claim 1, wherein receiving the data packet comprises receiving the  
data packet over a network using at least the Transmission Control Protocol (TCP), and wherein  
delaying the transmission comprises delaying the transmission of a duplicate ACK.

8. An article comprising one or more machine-readable storage media containing  
instructions that when executed enable a processor to:

receive a first data packet;  
determine that a second data packet is missing based on the received first data packet;  
and  
delay transmission of a missing data packet indication in response to determining that the  
second data packet is missing.

9. The article of claim 8, wherein the instructions when executed enable the  
processor to:

determine that the indication should be transmitted if the data packet is received out of  
order; and

wait a preselected amount of time in response to determining that the indication should be transmitted.

10. The article of claim 9, wherein the instructions when executed enable the processor to:

determine if the missing data packet is received within the preselected amount of time;  
and

transmit the indication in response to determining that the missing data packet is not received within the preselected amount of time.

11. The article of claim 8, wherein the data packet has an associated sequence number, and wherein the instructions when executed enable the processor to:

determine a sequence number of a next expected data packet; and

determine if the sequence number of the received data packet is greater than the sequence number of the next expected data packet.

12. The article of claim 8, wherein the instructions when executed enable the processor to determine if packet reordering occurred prior to receiving the data packet to delay the transmission of the acknowledgment in response to determining that packet reordering had occurred prior to receiving the data packet.

13. The article of claim 12, wherein the instructions when executed enable the processor to:

- detect a missing data packet among one or more data packets that are received prior to receiving the data packet;
- transmit a missing data packet indication;
- receive the missing data packet, wherein the missing data packet has an associated sequence number;
- store the received sequence number associated with the received data packet that was previously missing;
- receive one or more subsequent data packets having an associated sequence number; and
- compare the stored sequence number to the sequence number associated with the one or more subsequently received data packets to determine if packet reordering occurred.

14. An apparatus, comprising:

- an interface; and

- a control unit communicatively coupled to the interface, the control unit adapted to:

- determine an occurrence of packet reordering;
  - receive a first data packet over the interface;
  - determine that a data packet is missing based at least on the received first data packet; and

delay transmission of a missing data packet indication in response to determining that packet reordering has occurred and in response to determining that the second data packet is missing.

15. The apparatus of claim 14, wherein the interface is a network interface, and wherein the control unit is adapted to:

determine that the indication should be transmitted if the data packet is received out of order; and

wait a preselected amount of time in response to determining that the indication should be transmitted.

16. The apparatus of claim 15, wherein the control unit is adapted to determine if the missing data packet is received within the preselected amount of time; and transmit the indication in response to determining that the missing data packet is not received within the preselected amount of time.

17. The apparatus of claim 15, wherein the data packet has an associated sequence number, wherein the control unit is adapted to:

determine a sequence number of a next expected data packet; and

determine if the sequence number of the received data packet is greater than the sequence number of the next expected data packet.

18. The apparatus of claim 15, wherein the control unit is further adapted to:  
detect a missing data packet among one or more data packets that are received prior to  
receiving the data packet;  
transmit a missing data packet indication;  
receive the missing data packet, wherein the missing data packet has an associated  
sequence number;  
store the received sequence number associated with the received data packet that was  
previously missing;  
receive one or more subsequent data packets having an associated sequence number; and  
compare the stored sequence number to the sequence number associated with the one or  
more subsequently received data packets to determine if packet reordering  
occurred.
19. The apparatus of claim 15, wherein the interface is a network card capable of  
receiving data packets over a network employing Transmission Control Protocol, and wherein  
the control unit is adapted to wait the preselected amount of time based on a timer employed by  
Transmission Control Protocol in transmitting acknowledgements for successfully received data  
packets.
20. The apparatus of claim 15, wherein the control unit is adapted to wait the  
preselected amount of time comprises the control unit adapted to invoke a timer function of an

operating system executing on the apparatus and adapted to receive an indication from the operating system upon expiration of the preselected amount of time.